Study-B – 0.2 ± 0.18 and 0.4 ± 0.13 mm; Control – 0.3 ± 0.08 and 0.8 ± 0.09 mm, Control-A – 0.3 ± 0.08 and 0.4 ± 0.07 mm, Control-B – 0.4 ± 0.10 and 0.5 ± 0.10 mm. Mean Periotest Values were: Study-group −5.4 ± 0.14; Study-A −5.4 ± 0.14, Study-B −4.9 ± 0.54; Control −5.2 ± 0.13, Control-A −5.2 ± 0.14, Control-B −5.3 ± 0.06. Statistical significant difference of bone loss was noticed only in anterior sides of the following groups: Study and Control ($P < 0.001$), Study-A and Study-B ($P < 0.01$), Study-A and Control-A ($P < 0.01$). Mean Periotest values as well as bone loss in the other groups showed no statistical difference ($P > 0.05$). The correlation between gingival biotype and bone loss was: Study-rxy = −0.069 for posterior sides and rxy = −0.225 for anterior sides; Control-rxy = 0.113 and rxy = 0.106 respectively.

Conclusions and clinical implications: Thin gingival biotype lead to a bigger resorption around implants installed in one-step than those installed in two-steps or in sides with thick gingival tissue. The presence of greater bone-loss only in anterior sides can be explained by close or subcrestal position of the microgap due to ascending alveolar ridge. The lack of statistical difference between values of bone loss in other subgroups and the presence of a mature biological width in Study-Group demonstrates a good predictability of one-step approach. One-step placement and gingival biotype don't affect implant stability.

76 Short Oral Communicatons

The implant position influence upon crestal bone using one-step flapless surgery

Valentin Topalo, Andrei Mostovei, **Nicolae Chele**, Oleg Zanoaga

The State Medical and Pharmaceutical University, Chisinau, Moldova

Background: Implant-abutment junction is one of the factors which may cause peri-implant bone loss. Due to particularities of flapless approach, it is necessary to establish optimal relation between the bone crest and implant-abutment junction.

Aim: To establish the influence of two-stage dental implant platform position upon crestal bone during healing period in case of one-step flapless placement.

Methods: Forty-two partially edentulous patients (39.5 ± 0.33 years) had 83 two-stage dental implants (Alpha-Bio; 3.3–5.0 mm diameter and 8–13 mm length) inserted in posterior sides of the mandible by one-step flapless method (with immediate connection of healing abutments). Implant sides were divided into anterior and posterior ones. In dependence of relation between the shoulder and cortical bone, each side was divided into *supracrestal-1* (31 anterior sides and 46-posterior), *at the bone crest-2* (25 anterior sides and 19-posterior) and *subcrestal-3* (27 anterior sides and 18-posterior) positions. After the healing period, Periotest values and radiographic indices (Autodesk Design Review 2011, at the beginning and the end of healing period) were evaluated. Statistical analysis was made by calculating mean values, standard errors, indices of Student's paired *t*-test and the analysis of variance (ANOVA).

Results: After a mean healing period of 3.1 ± 0.2 months, mean Periotest value was −5.4 ± 0.14. Crestal bone loss had the following values: for anterior sides (1, 2 and 3 subgroups) 0.37 ± 0.10; 0.72 ± 0.13; 0.77 ± 0.148; for posterior sides – 0.22 ± 0.17; 0.76 ± 0.20 and 1.25 ± 0.186 respectively. According to the Student's *t*-test, statistical difference was noted between the next subgroups: *anterior-1* and *anterior-2* ($P < 0.05$), *anterior-1* and *anterior-3* ($P < 0.001$), *anterior-2* and *anterior-3* ($P < 0.01$), *posterior-1* and *posterior-2* ($P < 0.05$), *posterior-1* and *posterior-3* ($P < 0.001$). Between *posterior-2* and *posterior-3* subgroups there were no statistical difference ($P > 0.05$). Bone apposition was noted only in anterior and posterior supracrestal subgroups (eight cases, and 10 cases respectively). According to the analysis of variance, the ANOVA F-test had the following values: anterior – 14,336 ($P < 0.001$), posterior – 6671 ($P < 0.01$).

Conclusions and clinical implications: The supracrestal positioning of two-stage dental implants using one-step flapless surgery lead to a smaller bone resorption than subcrestal or at the bone crest positions.

77 Short Oral Communicatons

Healing of buccal dehiscence defects at implants installed immediately into extraction sockets – an experimental study in dogs

Eriberto Bressan,[1,2] Stefano Sivolella,[1,2] Edoardo Stellini,[1] Zoraya Almagro Urrutia,[2] Daniele Botticelli[3,4,5]

[1]*School of Dentistry, University of Padova, Padova, Italy,* [2]*Faculty of Dentistry, University of Medical Science, La Habana, Cuba,* [3]*ARDEC Ariminum Odontologica, Rimini, Italy,* [4]*Prince Philip Dental Hospital, The University of Hong Kong, Hong Kong Sar Pr, China,* [5]*Faculdade de Odontologia de Aracatuba, Universidade Estadual Paulista, San Paolo, Brazil*

Background: Some recent systematic review (Lang et al. 2012; Botticelli et al. 2008; e.g. Botticelli et al. 2004; Sanz et al. 2010) have documented that implants installed into alveolar sockets immediately after tooth extraction yielded a similar survival rate as implants placed in healed alveolar bony ridges.

Aim: To evaluate the influence of implant positioning into extraction sockets on bone formation at buccal alveolar dehiscence defects.

Methods: In six Labrador dogs the pulp tissue of the mesial roots of $_4P_4$ was removed and the root canals were filled. Flaps were elevated bilaterally, the premolars hemi-sectioned and the distal roots removed. The implants were placed in contact with either the buccal (test site) or with the lingual (control site) bony wall of the extraction sockets. Triangular buccal bony dehiscence defects, 3 mm deep and 3.5 mm wide, were then prepared. No regenerative procedures were done. Healing abutments were affixed and a non-submerged healing was